

Figure 1

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Figure 2

Human DB1 DNA and Protein Sequence:

10	20	30	40	50	60
AGCGGGGGGGAGTGGGGAGGAGGGGGGTCGGCCGCCAGCCATGGAGGCCAAGTGGACCG					
				M E A N W T>	
70	80	90	100	110	120
CGTTCCCTGTTCCAGGCCCATGAAGCTTCCCATCACCAACAGCAGGGCAGCACAGAACAGCT					
A F L F Q A H E A S H H Q Q Q A A Q N S>					
130	140	150	160	170	180
TGCTGCCCTCTGAGCTCTGCCGTGGAGCCCCCTGATCAGAAACCATTTGCTTCCAATAC					
L L P L L S S A V E P P D Q K P L L P I>					
190	200	210	220	230	240
CAATAACTCAGAAACCTCAGGGTGCACCAGAAACATTAAGGATGCCATTGGGATTAAAAA					
P I T Q K P Q G A P E T L K D A I G I K>					
250	260	270	280	290	300
AAGAAAAACCCAAAACCTTCATTGTGTGCACTTACTGCAGTAAAGCTTCAGGGACAGCT					
K E K P K T S F V C T Y C S K A F R D S>					
310	320	330	340	350	360
ATCACCTGAGGCCACGAATCCTGCCACACAGGGATCAAGTTGGTGTCCGGCCAAAGA					
Y H L R R H E S C H T G I K L V S R P K>					
370	380	390	400	410	420
AAACCCCCACCACGGTGGTTCCCTTATCTTACCATCGCTGGGGACAGCAGCCAACTT					
K T P T T V V P L I S T I A G D S S R T>					
430	440	450	460	470	480
CGTTGGTCTCGACCATTGCAGGCATCTTGTCAACAGTCACTACATCTTCTCGGGCACCA					
S L V S T I A G I L S T V T T S S S G T>					
490	500	510	520	530	540
ACCCCACTAGCAGTGCCAGCACACAGCTATGCCAGTGACCCAGTCTGTCAAGAAACCCA					
N P S S S A S T T A M P V T Q S V K K P>					
550	560	570	580	590	600
GTAAGCTGTCAAGAAGAACATGCTTGTGAGATGTGGGAAGGCCTTCCGAGATGTGT					
S K P V K K N H A C E M C G K A F R D V>					
610	620	630	640	650	660
ACCATCTCAATCGACACAAGCTCTCCATTCAAGATGAGAAACCCCTTGAGTGTCTATT					
Y H L N R H K L S H S D E K P F E C P I>					
670	680	690	700	710	720
GTAATCAGCGCTTCAAGAGGAAGGACCGGATGACTTACCATGTGAGGTCTCATGAAGGAG					
C N Q R F K R K D R M T Y H V R S H E G>					
730	740	750	760	770	780
GCATCACCAAACCTATACTTGCAGTGGTGTGGAAAGGCTCTCAAGGCCTGACCACT					
G I T K P Y T C S V C G K G F S R P D H>					

Figure 2 (con't)

790	800	810	820	830	840
TAAGCTGTCATGTAACATGTCCATTCAACAGAAAGACCCCTTCAAATGCCAACGTGCA					
L	S	C	H	V	K
850	860	870	880	890	900
CTGCTGCCCTTGCCACCAAAGACAGACTGCGGACACACATGGTGCGCCATGAAGGCAAGG					
T	A	A	F	A	T
910	920	930	940	950	960
TATCATGTAACATCTGTGGGAAGCTCCTGAGTGCAGCATACTACATCACCAGCCACTTAAAGA					
V	S	C	N	I	C
970	980	990	1000	1010	1020
CTCATGGGCAGAGCCAAAGTATCAACTGTAATACATGTAAACAAGGCATCAGTAAACAT					
T	H	G	Q	S	Q
1030	1040	1050	1060	1070	1080
GCATGAGTGAAGAGACAGTAACCAAAAGCAGCAGCAGCAGCAGCAGCAACAAACAC					
C	M	S	E	E	T
1090	1100	1110	1120	1130	1140
AACAACAACATGTGACAAGCTGGCCAGGGAAAGCAAGTAGAAACACTCAGACTGTGGGAAG					
Q	Q	Q	H	V	T
1150	1160	1170	1180	1190	1200
AAGCTGTTAAAGCAAGGAAGAAAGAAGCTGCTAACCTGTGCCAACCTCCACGGCTGCTA					
E	A	V	K	A	R
1210	1220	1230	1240	1250	1260
CGACACCTGTGACTCTCACTACTCCATTCACTGATAACATCCTCTGTGCTGAGACTA					
T	T	P	V	T	L
1270	1280	1290	1300	1310	1320
TGTCAAACCCAGTCACAGTGGCAGCTGCAATGAGCATGAGAAGTCCAGTAAATGTTCAA					
M	S	N	P	V	T
1330	1340	1350	1360	1370	1380
GTGCAGTTAACATAACCAGCCCCATGAACATAGGGCATCCTGTAACATAACCAGTCCAT					
S	A	V	N	I	T
1390	1400	1410	1420	1430	1440
TATCCCATGACCTCTCCCTTAACACTCACTACCCAGTCACCTCCCCACCCCCGGTCACTG					
L	S	M	T	S	P
1450	1460	1470	1480	1490	1500
CCCCAGTGAATATAGCACACCCCTGTCACCATCACATCTCCAATGAATCTACCCACACCTA					
A	P	V	N	I	A
1510	1520	1530	1540	1550	1560
TGACATTAGCCGCCCTCTCAATATAGCAATGAGACCTGTAGAGAGCATGCCTTTCTG					
M	T	L	A	A	P
1570	1580	1590	1600	1610	1620
CTGAG					
G	T	A	T	C	T

Figure 2 (con't)

1570 1580 1590 1600 1610 1620
CCCAAGCTTGCTACATCACCGCCTGGTAAACAGTATTATAAAATCAAATGGGTA
P Q A L P T S P P W * >

1630 1640 1650 1660 1670 1680
AAAGTAAATATTACAGCAACTTAACCTTTAGTTGATTAAAGCAAAAGTAAACCATGA

1690 1700 1710 1720 1730 1740
AATTGGGAGATTTATTACATTAGTTAATAAGAGTGTGGTAGCATTTCTCCAATTG

1750 1760 1770 1780 1790 1800
CTGGGATTATTCAAAGTAGGGTGTGTAACTTATCACTGGACCACTTAGTTAAC

1810 1820 1830 1840 1850 1860
AGAAATTCCCTTTAGCTGACAAACATTGCTTAAACAGGATAGTAGTTGGCAAGATGAAATG

1870 1880 1890 1900 1910 1920
CCAGAATTAAACCAATCATAAGTAGAACCCACTTCAAAATAAAAAACAGCATTACTAT

1930 1940 1950 1960 1970 1980
TTCTAATCCCAAGGAATCACTTTATTGTAACACTAGCAGAACTCTCTCCCTATACAAG

1990 2000 2010 2020 2030 2040
GTGGATGGCTGATTAAACCTGAAATTAAATCCACAGATTGAGAGCTAGTGTAGAATT

2050 2060 2070 2080 2090 2100
GTCTGTGTTATTGTTTATGAGTAAATACATGCATTGTCATAATAAAATGCATTTCAG

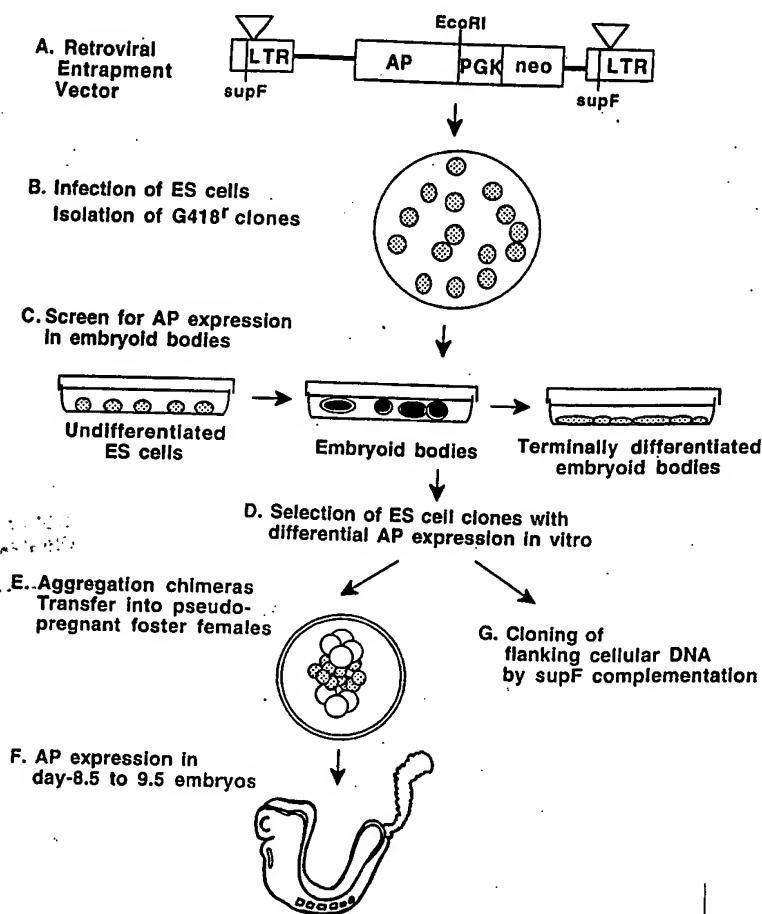
2110 2120 2130 2140 2150 2160
AGAATATGCATTTACCTTGGGAATATGTTAATTCAAGCAGCATTCCCTATGGGAAAG

2170 2180 2190 2200 2210 2220
GTGATACAGCTCTGATATGCAAAGCATATGATAATTATCATTCTAACCTCAACGTATA

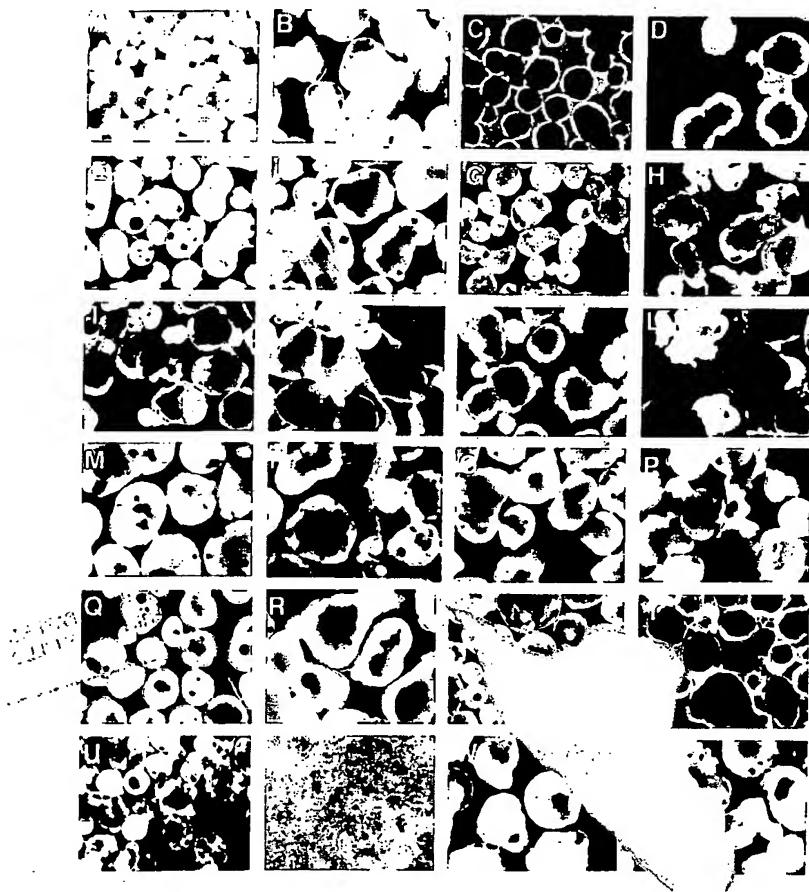
2230 2240 2250 2260 2270 2280
ATAGGGATTGTGACCTGATATTGGAGATGAAATATTGCTCAGCATATTAAATCCCGATG

2290 2300
GAATATAGCATTGTTGACTTTT

Figur 3



Figur 4



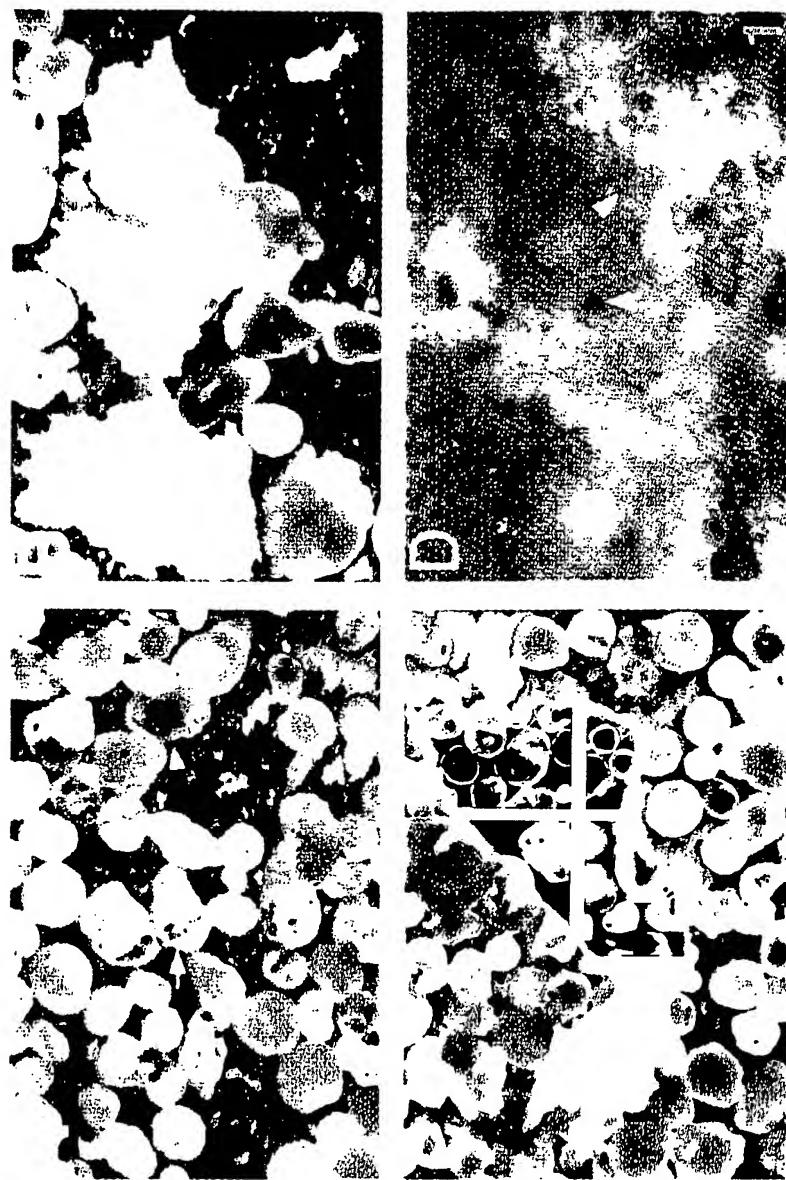
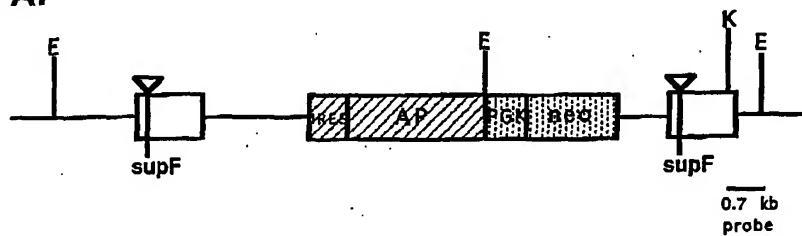


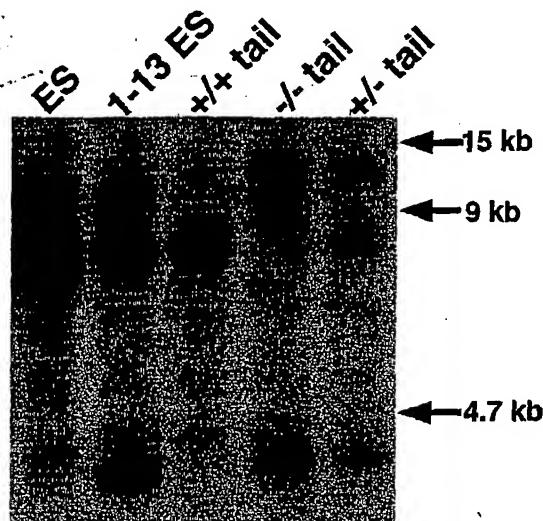
Figure 5

Figure 6

A:



B:



Allgemeine *o* Verallgemeinerte

Verfl	168	KPVRKHCASQKMAFQYVFLKRRKHSKSHDSDPFCIPNFRKQKMTAVNSHEDQGQVTPCNGKFRDQGSCVYKHSNSPDKQ	224
Wpfl	275	KRKHGKACSKKQKDFVYFLKRRKHSKSHDSDPFCIPNFRKQKMTAVNSHEDQGQVTPCNGKFRDQGSCVYKHSNSPDKQ	372
Verfl	265	TGTGAAKTCRFLKRRKHSKSHDSDPFCIPNFRKQKMTAVNSHEDQGQVTPCNGKFRDQGSCVYKHSNSPDKQ	360
Wpfl	373	KCEAATGTCRFLKRRKHSKSHDSDPFCIPNFRKQKMTAVNSHEDQGQVTPCNGKFRDQGSCVYKHSNSPDKQ	469

Figure 7

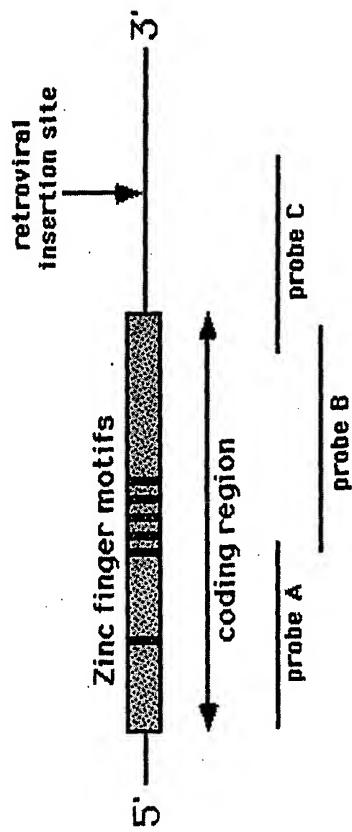


Figure 8

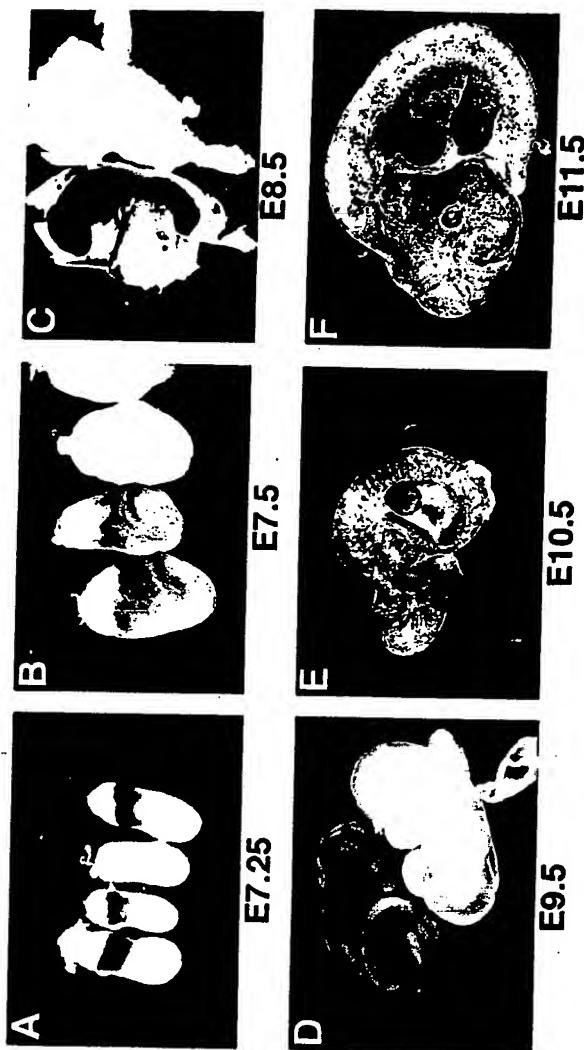


Figure 9

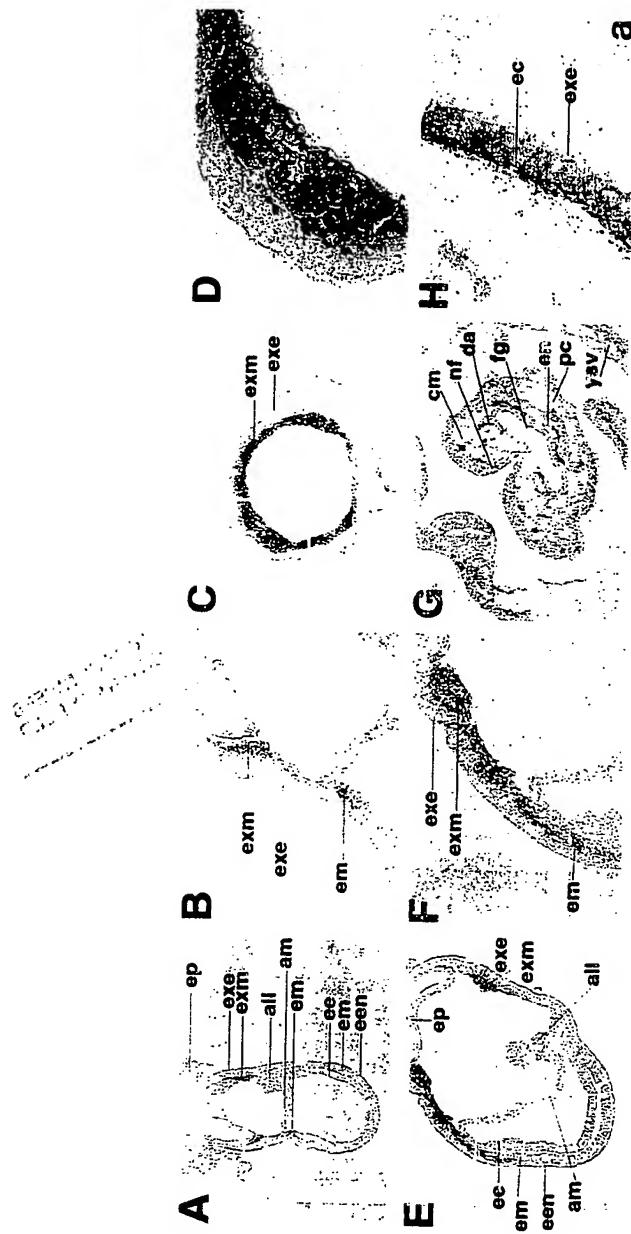


Figure 10

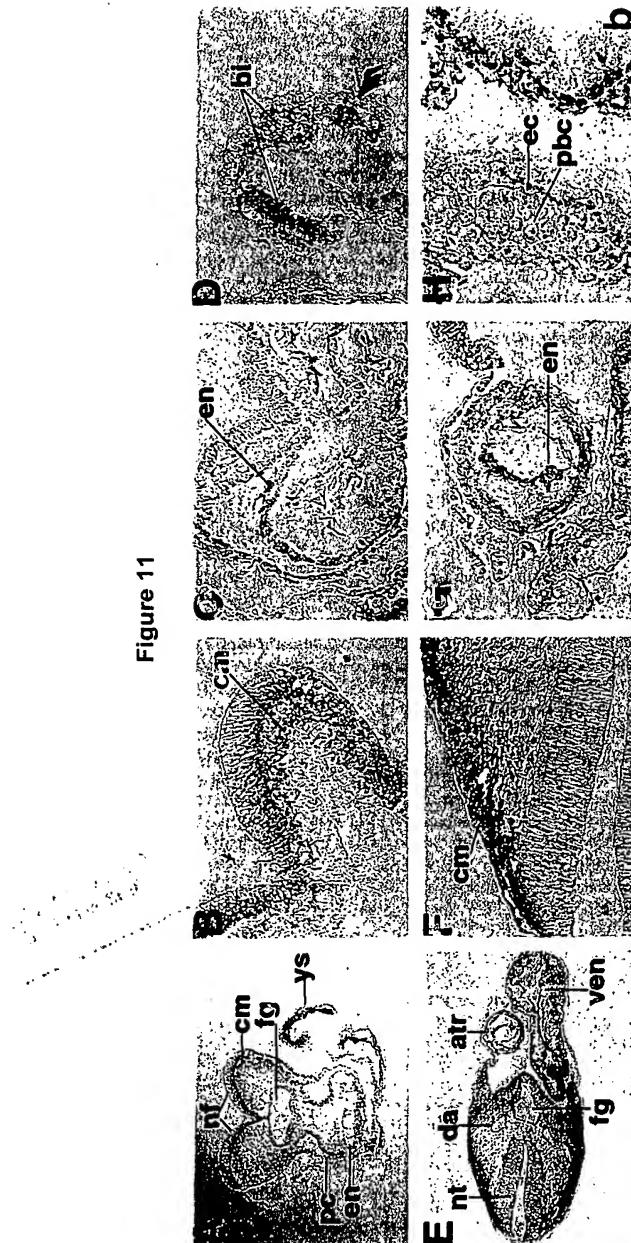


Figure 11

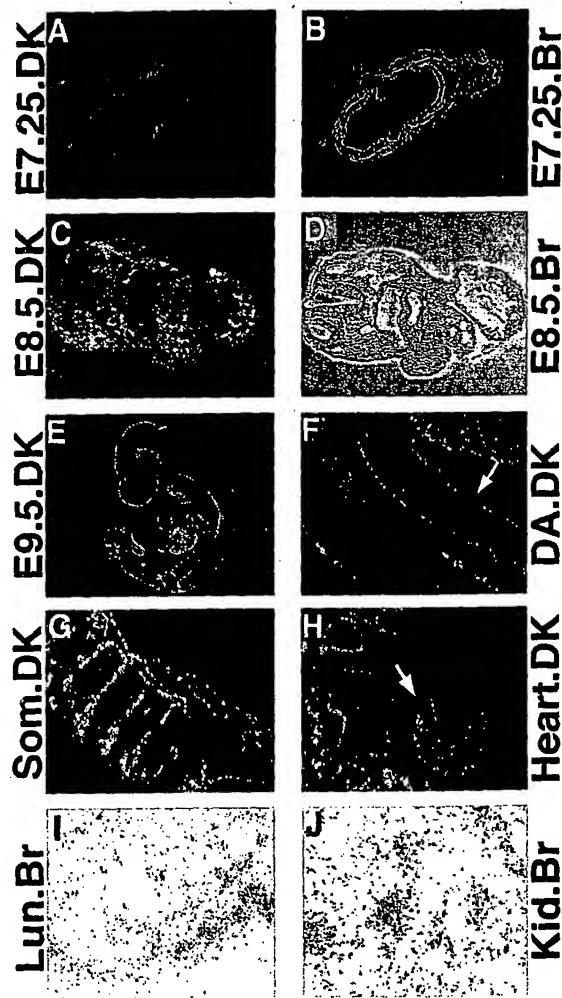
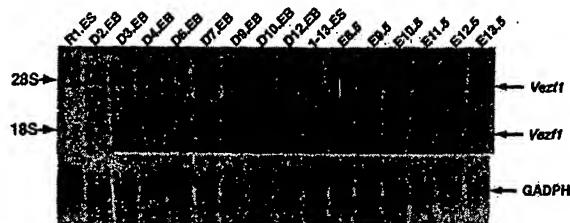


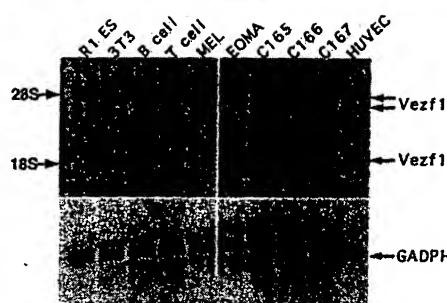
Figure 12

Figure 13

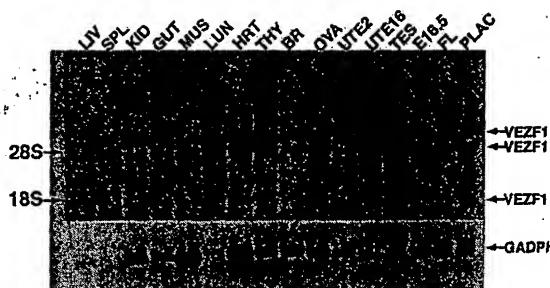
A.



B.



C.



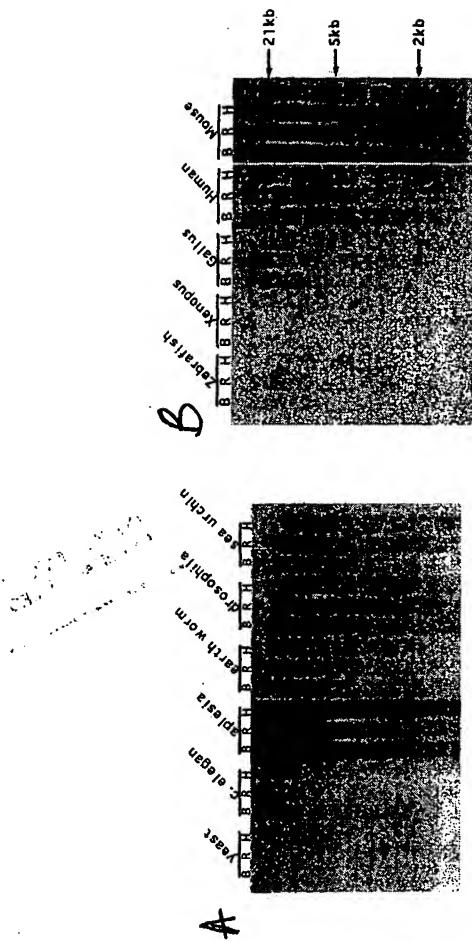
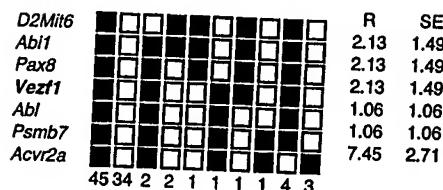


Figure 14

Figure 15

A: Jackson BSS Chromosome 2



B: Jackson BSS Chromosome 2

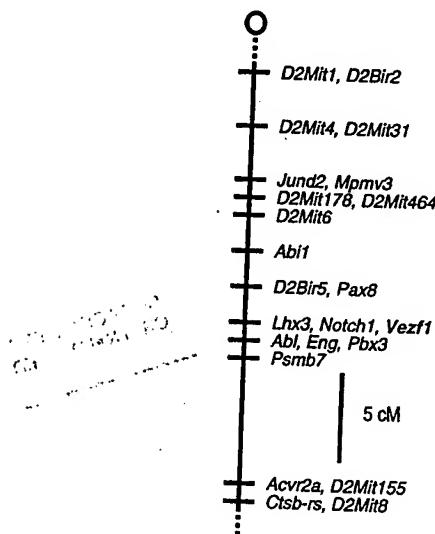
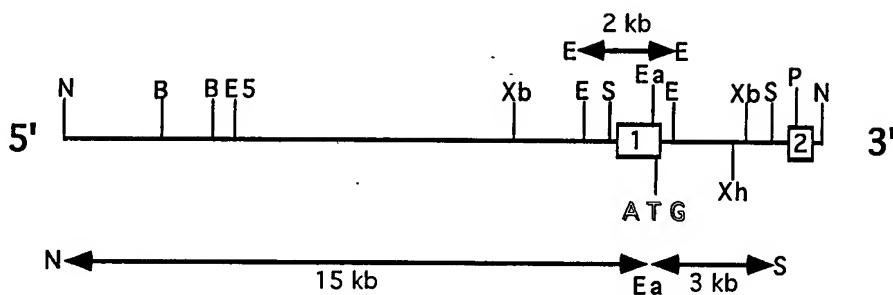


Figure 16

Restriction Enzyme Map of a 20 kb Genomic DNA of the Vezf1 Gene



BamHI (B), EcoRI (E), EcoRV (E5), Eagl (Ea), NotI (N), PstI (P), SacI (S), XbaI (Xb), and Xhol (Xh).

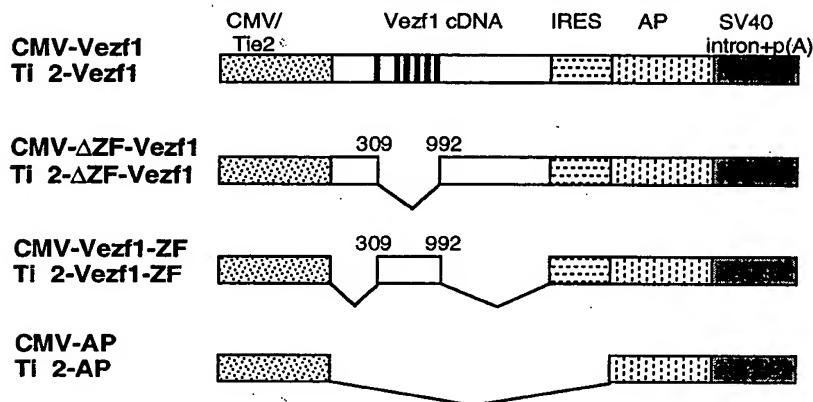
— Intronic sequence;

1 Exon 1

2 Exon 2

Figure 17

Vezf1 EXPRESSION VECTORS



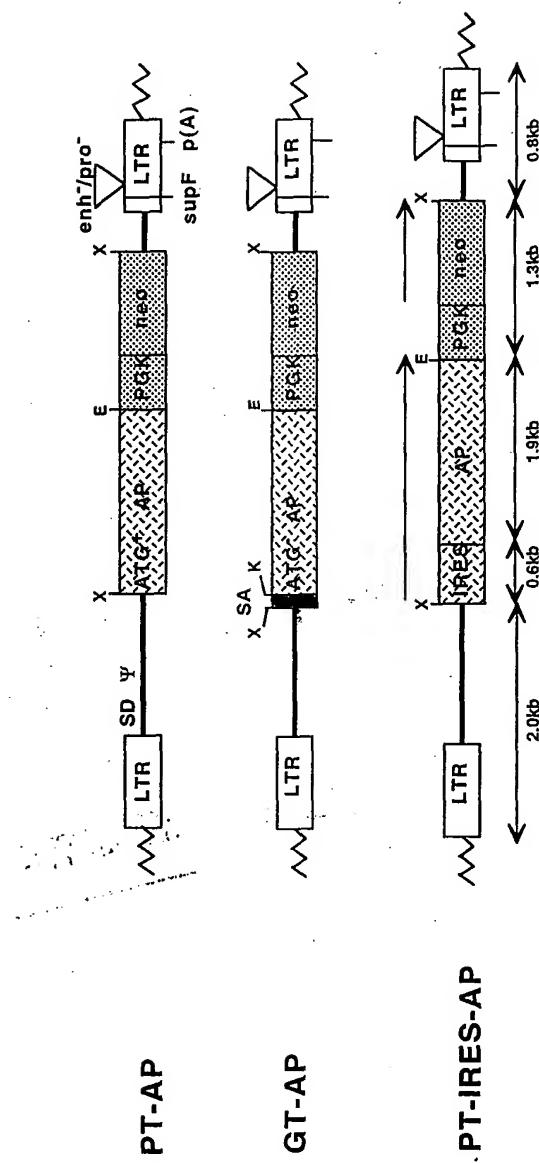


Figure 18